

1           1. A tissue fastener comprising  
2           a shaft having a member disposed thereon for lodging  
3 the shaft within the tissue, and  
4           a tissue engaging head disposed at a proximal end of  
5 the shaft,  
6           a region of the shaft being relatively flexible to  
7 render the head movable with respect to the shaft.

1           2. The tissue fastener of claim 1 wherein the  
2 region comprises substantially an entire length of the  
3 shaft.

1           3. The tissue fastener of claim 2 wherein the  
2 region comprises flexible material.

1           4. The tissue fastener of claim 3 wherein the  
2 flexible material comprises a mesh.

1           5. The tissue fastener of claim 1 wherein the shaft  
2 comprises a mesh material, the member and the head being  
3 molded onto the mesh.

1           6. The tissue fastener of claim 1 wherein the  
2 member comprises at least one barb.

1           7. The tissue fastener of claim 1 wherein the shaft  
2 comprises generally rigid material and the region comprises  
3 a flexible joint between the shaft and the head.

1           8. The tissue fastener of claim 7 wherein the  
2 flexible joint comprises a frangible section of the shaft,  
3 and further comprising a flexible member extending between  
4 the shaft and the head past the frangible section.

1           9. The tissue fastener of claim 8 wherein the  
2 breakable section is defined by at least one opening  
3 disposed through a wall of the shaft.

1           10. The tissue fastener of claim 8 wherein the  
2 flexible member comprises a plurality of filaments.

1           11. The tissue fastener of claim 8 wherein the  
2 flexible member comprises a flexible tube.

1           12. The tissue fastener of claim 8 wherein the  
2 flexible member extends along substantially an entire length  
3 of the shaft.

1           13. The tissue fastener of claim 8 wherein the  
2 shaft and the head comprise an integral molded unit, the  
3 flexible member being molded therewithin.

1           14. The tissue fastener of claim 1 made from  
2 polymeric material.

1           15. The tissue fastener of claim 1 made from  
2 bioabsorbable material.

1           16. The tissue fastener of claim 1 wherein the  
2 shaft is hollow and defines an interior passage, the head  
3 including an opening in communication with the passage.

1           17. The tissue fastener of claim 16 wherein the  
2 passage is open at a distal end of the shaft.

1           18. The tissue fastener of claim 16 wherein the  
2 passage is closed at a distal end of the shaft.

1           19. The tissue fastener of claim 1 wherein the head  
2 has a flat distal surface.

1           20. The tissue fastener of claim 1 wherein the head  
2 has a toothed distal surface.

1           21. A tissue fastener comprising  
2 a shaft,  
3 a member disposed at a distal region of the shaft  
4 for lodging the shaft within the tissue, and  
5 a tissue engaging head disposed at a proximal end of  
6 the shaft,  
7 the shaft being relatively flexible between the  
8 member and the head to render the head movable with respect  
9 to the shaft.

1           22. The tissue fastener of claim 21 wherein the  
2 shaft comprises a mesh extending between the member and the  
3 head.

1           23. A tissue fastener comprising  
2           a generally rigid shaft having a member disposed  
3 thereon for lodging the shaft within the tissue,  
4           a tissue engaging head disposed at a proximal end of  
5 the shaft, and  
6           a flexible joint between the shaft and the head to  
7 render the head movable with respect to the shaft.

1           24. The tissue fastener of claim 23 wherein the  
2 flexible joint comprises a breakable section of the shaft,  
3 and further comprising a flexible member extending between  
4 the shaft and the head past the breakable section.

1           25. The tissue fastener of claim 24 wherein the  
2 breakable section is frangible.

1           26. The tissue fastener of claim 23 wherein the  
2 flexible member comprises a plurality of filaments.

1           27. The tissue fastener of claim 23 wherein the  
2 flexible member comprises a flexible tube.

1           28. Apparatus comprising  
2           a tissue fastener comprising a shaft having a member  
3 disposed thereon for lodging the shaft within the tissue,  
4 and a tissue engaging head disposed at a proximal end of the  
5 shaft, a region of the shaft being relatively flexible to  
6 render the head movable with respect to the shaft, and  
7           an insertion tool engageable with the tissue  
8 fastener for inserting the tissue fastener into tissue.

1           29. The apparatus of claim 28 wherein  
2           the member is disposed at a distal region of the  
3           shaft for lodging the shaft within the tissue, the tissue  
4           engaging head is disposed at a proximal end of the shaft,  
5           and the shaft is relatively flexible between the member and  
6           the head,  
7           the insertion tool comprising an engagement portion  
8           for engaging the member.

1           30. The apparatus of claim 29 wherein the head  
2           includes an aperture, the engagement portion of the tool  
3           being configured to extend through the aperture when engaged  
4           with the member.

1           31. A method for tissue attachment comprising  
2           providing a tissue fastener comprising a shaft  
3           having a member disposed thereon for lodging the shaft  
4           within the tissue, and a tissue engaging head disposed at a  
5           proximal end of the shaft, a region of the shaft being  
6           relatively flexible to render the head movable with respect  
7           to the shaft, and  
8           inserting the tissue fastener through a first tissue  
9           and into a second tissue so that the member lodges within  
10          the second tissue and the head urges the first tissue  
11          against the second tissue.

1           32. The method of claim 31 wherein the first tissue  
2           and the second tissue are regions of a common tissue  
3           structure.

1           33. The method of claim 32 wherein the tissue  
2 structure is cartilage and, prior to the inserting, the  
3 first region is separated from the second region by a tear  
4 in the cartilage.

1           34. The method of claim 31 wherein the first tissue  
2 is soft tissue and the second tissue is bone.

1           35. A method for making a tissue fastener  
2 comprising  
3           providing a shaft having a member disposed thereon  
4 for lodging the shaft within the tissue, and a tissue  
5 engaging head disposed at a proximal end of the shaft, and  
6           making a region of the shaft relatively flexible to  
7 render the head movable with respect to the shaft.

1           36. The method of claim 35 further comprising  
2 making the region comprise substantially an entire length of  
3 the shaft.

1           37. The method of claim 36 further comprising  
2 making the region from flexible material.

1           38. The method of claim 37 wherein the flexible  
2 material comprises a mesh.

1           39. The method of claim 35 wherein the shaft  
2 comprises a mesh material, and further comprising molding  
3 the member and the head onto the mesh.

1           40. The method of claim 35 wherein the shaft  
2 comprises generally rigid material, the making comprising  
3 forming a flexible joint between the shaft and the head in  
4 the region.

1           41. The method of claim 40 wherein the forming  
2 comprises providing a breakable section of the shaft, and  
3 further comprising extending a flexible member between the  
4 shaft and the head past the breakable section.

1           42. The method of claim 41 further comprising  
2 forming the breakable section to be frangible.

1           43. The method of claim 42 further comprising  
2 defining the breakable section by at least one opening  
3 disposed through a wall of the shaft.

1           44. The method of claim 41 wherein the flexible  
2 member comprises a plurality of filaments.

1           45. The method of claim 41 wherein the flexible  
2 member comprises a flexible tube.

1           46. The method of claim 41 further comprising  
2 extending the flexible member along substantially an entire  
3 length of the shaft.

1           47. The method of claim 41 further comprising  
2 molding the shaft and the head as an integral unit, and  
3 molding the flexible member therewithin.

1           48. The method of claim 35 further comprising  
2 making the tissue fastener from polymeric material.

1           49. The method of claim 35 further comprising  
2 making the tissue fastener from bioabsorbable material.

1           50. The method of claim 35 further comprising  
2 providing the shaft with an interior passage, and forming an  
3 opening in the head in communication with the passage.

1           51. The method of claim 50 further comprising  
2 opening the passage at a distal end of the shaft.

1           52. The method of claim 50 further comprising  
2 closing the passage at a distal end of the shaft.

1           53. The method of claim 35 further comprising  
2 providing the head with a flat distal surface.

1           54. The method of claim 35 further comprising  
2 providing the head with a toothed distal surface.